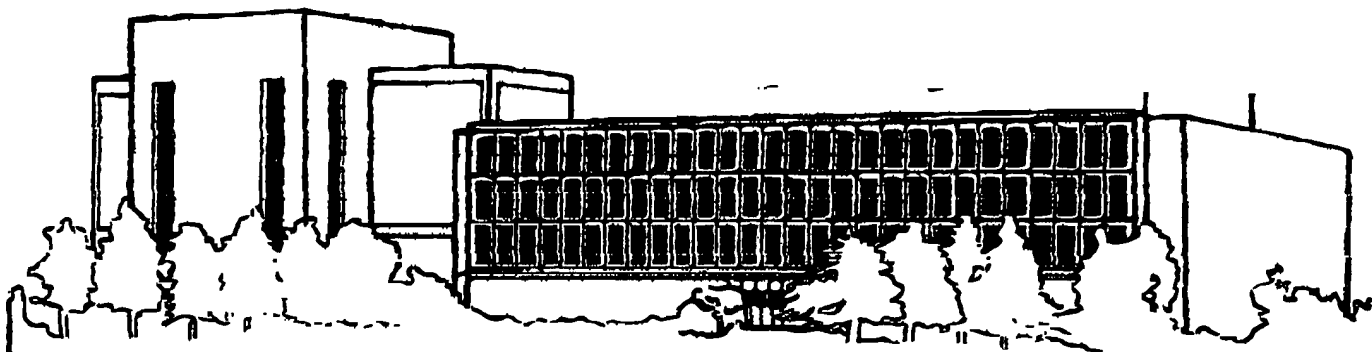


EXHIBIT A

**General Telefax Cover Page**

From: Chemical Abstracts Service
P.O. Box 3012
2540 Olentangy River Road
Columbus, Ohio 43210

Telefax: 614-447-3713

Send To: Name: Marjorie LeFevre (Alliant Techsystems Inc., Magna, Utah)
Telephone (fax machine): 801-251-2328
Telephone (person): 801-251-2070
Date: 4 January 2000
Sender: David W. Weisgerber (Internet: dweisgerb@cas.org)
(Phone: 1-614-447-3640; FAX: 1-614-461-7140)

No. of pages transmitted (including this cover page): 5



A Division of the American Chemical Society

TELEFAX LETTER

David W. Welsgerber
Editor
Office of the Editor
614-447-3640

4 January 2000

Ms. Marjorie LeFevre
Alliant Techsystems, Inc.
P.O. Box 98
Magna, Utah 84044-0098

Dear Ms. LeFevre,

Your fax of 23 December to Customer Service has just been sent to my attention. I will try to provide additional information that may assist you in your discussions with the patent office.

The two CAS Registrations in question, 9010-89-3 and 25103-87-1, clearly represent two very different polymers. While both polyesters are prepared from Hexanedioic acid, the diols involved are quite different. One polyester [25103-87-1] has 1,4-butanediol as the alcoholic component which reacts with the diacid to form the polyester linkages. The second polyester [9010-89-3] has diethylene glycol as the alcoholic component. In addition to providing the alcohol groups that react with the acid to form the polyester linkages, diethylene glycol possesses an ether linkage that is not present in the 1,4-butanediol-based polyester.

I have attached displays of the CAS Registry File records for these two polyesters. There are several points that may be worth noting:

1. In addition to the quite different systematic names for the alcoholic monomers (i.e., 2,2'-oxybis[ethanol and 1,4-butanediol), the molecular formulas and CAS Registry Numbers for the two monomers are also quite different:
 - Molecular formulas C₄ H₁₀ O₃ and C₄ H₁₀ O₂, respectively - Note the additional oxygen atom in the diethylene glycol
 - CAS Registry Numbers 111-46-6 and CAS 110-63-4, respectively
2. The Polymer Class Terms (PCT) assigned to the two polymers are different:
 - Polyester, Polyester formed, Polyether for 9010-89-3
 - Polyester, Polyester formed for 25103-87-1

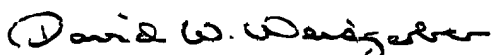
The Polymer Class Terms identify the chemical functional groups present in the final polymers. Note the presence of the polyether functional group in the case of the polyester prepared from diethylene glycol [9010-89-3].

3. The two polymers are cited in the EPA Toxic Substances Control Act (TSCA) Inventory (this is indicated by the "TSCA" code that appears in the Locator (LC) field in the two displays. This is an indication of the distinctive nature of the two polymers since both are included on the inventory. Each unique commercial substance appears with its own CAS Registry Number on the inventory.

It may be worth noting that within the *Chemical Abstracts* database, there are 23 documents cited in which both polymers are indexed, 6 of these are patent documents. This again is an indication of their distinctive natures.

I hope this information may be of help to you. I apologize for the delay in responding to your request for additional information.

Sincerely,



David W. Weisgerber
Editor, Chemical Abstracts

RN 9010-89-3 REGISTRY REGISTRY COPYRIGHT 2000 ACS
RN 9010-89-3 REGISTRY
CN Hexanedioic acid, polymer with 2,2'-oxybis[ethanol] (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Adipic acid, polyester with diethylene glycol (8CI)
CN Diethylene glycol, polyester with adipic acid (8CI)
CN Ethanol, 2,2'-oxybis-, polymer with hexanedioic acid (9CI)

OTHER NAMES:

CN Adipic acid-diethylene glycol copolymer
CN Adipic acid-diethylene glycol oligomer
CN Adipic acid-diethylene glycol polyester
CN Adipic acid-diethylene glycol polymer
CN Diethylene glycol-adipic acid copolymer
CN Diethylene glycol-adipic acid polymer
CN Diethylene glycol-hexanedioic acid copolymer
CN Oligodiethylene glycol adipate

CN TV

DR 52283-87-1, 246223-71-2

MF (C6 H10 O4 . C4 H10 O3)x

CI PMS, COM

PCT Polyester, Polyester formed, Polyether ← Note "Polyether"

LC STN Files: CA, CAPLUS, CHEMLIST, CSCHEM, IFICDB, IFIPAT, IFIUDB,
MSDS-OHS, TOXLIT, USPATFULL

Other Sources: DSL**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)

CM 1

CRN 124-04-9

CMF C6 H10 O4

CM 2

CRN 111-46-6

CMF C4 H10 O3

← Registry Number for diethylene glycol*

← Molecular formula for diethylene glycol*

* systematic name 2,2'-oxybis[ethanol]

RN 25103 87 1 REGISTRY REGISTRY COPYRIGHT 2000 ACS
PN 25103-87-1 REGISTRY
CN Hexanedioic acid, polymer with 1,4-butanediol (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,4-Butanediol, polyester with adipic acid (8CI)
CN 1,4-Butanediol, polymer with hexanedioic acid (9CI)
CN Adipic acid, polyester with 1,4-butanediol (8CI)
OTHER NAMES:
CN 1,4-Butanediol-adipic acid copolymer
CN 1,4-Butanediol-hexanedioic acid copolymer
CN Adipic acid-1,4-butanediol copolymer
CN adipic acid-1,4-butanediol copolymers
CN Adipic acid-1,4-butanediol polyester
CN Adipic acid-1,4-butanediol polymer
CN Adipic acid-1,4-butylene glycol copolymer
CN Adipic acid-1,4-butylene glycol polymer
CN Adipic acid-butanediol copolymer
CN Adipic acid-butanediol polymer
CN Adipic acid-butylene glycol copolymer
CN Adipic acid-butylene glycol polymer
CN Adipic acid-tetramethylene glycol copolymer
CN Adipic acid-tetramethylene glycol polymer
CN Butylene adipate polymer
CN Butylene glycol-adipic acid copolymer
CN PBAG
CN Poly(1,4-butanediol adipate)
CN Poly(1,4-butylene adipate)
CN Poly(butylene adipate)
CN Poly(tetramethylene adipate)
CN S 102250
DR 105866-32-8
MF (C6 H10 O4 . C4 H10 O2)x
CI PMS, COM
FCT Polyester, Polyester formed
LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, CA, CAPLUS, CHEMCATS,
CHEMLIST, CSCHEM, IFICDB, IFIPAT, IFIUDB, MSDS-OMS, FIRA, TOXLINE,
TOXLIT, USPATFULL, VTB
Other Sources: DSL**, TSCA**
(*Enter CHEMLIST File for up-to-date regulatory information)

CM 1

CRN 124-04-9
CMF C6 H10 O4

CM 2

CRN 110-63-4 ← CAS Registry Number for 1,4-Butanediol
CMF C4 H10 O2 ← Molecular formula for 1,4-Butanediol